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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,620	03/19/2004	Daniel George Bartoli	RIDM 2 00002	7854
27885	7590	06/01/2005	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			FRANK, RODNEY T	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/804,620	Applicant(s) BARTOLI ET AL. 	
	Examiner Rodney T. Frank	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 is/are allowed.
- 6) ☒ Claim(s) 1, 7, and 14 is/are rejected.
- 7) ☒ Claim(s) 2-6, 8, 9 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spanke (U.S. Patent Application Publication Number 2002/0109626). Spanke discloses the microwave measuring device, which preferably operates with microwave bursts, serves to produce a measured value (X.sub.H) representing the level of the contents of a vessel (200). It comprises a transceiver unit (2) for generating a level-dependent intermediate-frequency signal (ZF) by means of a transmit signal (S.sub.2) and a receive signal (E.sub.2), and a transducer element (1) which in operation couples waves (S.sub.1), particularly pulsed waves, into the vessel under control of the transmit signal (S.sub.2) and converts echo waves (E.sub.1) reflected from the contents (201) of the vessel into the receive signal (E.sub.2). The intermediate-frequency signal (ZF) is fed to a control unit (3) of the level measuring device where it is stored in the form of a sampling sequence (AF) in a volatile data memory (33). In this manner, both amplitude information and phase information is available for the level measurement. The device is thus capable of measuring level with high accuracy, particularly accurately to a millimeter, and very fast (Please see the abstract).

In reference to claim 1, a method for generating an echo profile (or envelop) in a time-of-flight/microwave ranging system comprising transmitting one or more burst of energy towards a surface (see the abstract and figure 1), receiving reflected pulse from the surface and converting the pulses into an echo profile/envelope, determining a receive time, (see paragraphs [0005] through [0010] whereby the reference discloses that this practice is well established in the art of echo ranging systems) , the receive time utilizing an amplitude and a reference/measurement point (see paragraph [0082]), relative to said amplitude, and applying a correction factor (see paragraph [0094]). Though the exact method disclosed is not explicitly disclosed in the reference, the method and apparatus disclosed in Spanke has a similar scope to the present invention and performs in a similar manner while meeting the general limitations of the claimed invention. Therefore, the method of claim 1 would be obvious to one of ordinary skill in the art at the time of the invention in view of the Spanke disclosure.

In reference to claims 7 and 14, the level measurement device disclosed in the claims is a well known design for echo ranging systems with the addition of utilizing an amplitude of the echo pulses. As discussed above in reference to claim 14, since the overall scope of the claims is viewed as well known in the art of echo ranging systems and the amplitude consideration is disclosed, as discussed earlier., then the examiner believes that the general scope, in the broadest interpretation of claim 14, is disclosed in view of the Spanke reference with particular focus on paragraphs [0005] through [0010] whereby the reference discloses that this type of apparatus is well established in the art of echo ranging systems.

Allowable Subject Matter

Claims 10-13 are allowed.

The following is an examiner's statement of reasons for allowance: The method of generating an echo profile in a time-of-flight ranging system comprising steps of applying a time correction including determining a correction factor C_r as defined in the claim, in combination with all other limitations of independent claim 10 is not disclosed nor deemed obvious in view of the prior art of record. The prior art does not disclose the specific correction factor, specifically utilizing the slope edge on an echo pulse.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 2-6, 8, 9, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner has cited various references deemed relevant to the general state of the art of the present invention.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (571) 272-2193. The examiner can normally be reached on M-F 9-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RTF
May 25, 2005


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800